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ABSTRACT

After a brief historical review of the place of creativity in educational programs, this article argues that we are moving into a new phase in educational thinking about the role of creativity in education. Educational objectives now include many aspects of creative behavior. The use of textbooks, supplementary materials, tests, and training methods which facilitate creativity has increased to the point where students achieve higher creativity scores than did comparable groups nine years ago. We seem to be moving to a stage in which creative problem solving and creative expression will be integrated into the total curriculum rather than just in specific subject areas. One emphasis is on assisting students to see relationships between what they are asked to learn in school and their future careers. Specific examples are given of techniques the language arts teacher can use to help children learn about the future. (AA)

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LEARNING ABOUT THE FUTURE THROUGH LANGUAGE ARTS

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Throughout its 200-year history, education in the United States has been stirred by issues concerning creativity. And it may well be that this is responsible for much of our greatness and uniqueness. This was not true of older cultures and civilizations.

In China, one of the oldest civilizations with perhaps the oldest civil service system, the highest grades went to those with the greatest memory. Success was not attained through the solution of problems, constructive coping with stress and challenge, or originality of thinking. What counted was the ability to conform to the style of the ancient and acknowledged masters of literary classics.

In the Hebraic culture, the individual was still subject to external authority. Some of the older and more brilliant students were encouraged to search out the meaning of what they had learned, provided they did not venture too far from traditional beliefs. Obedience to one's elders was deeply ingrained. Reformers, such as Jesus, saw the superficiality of such a system, but their efforts were never powerful enough to bring about substantial changes that might have been instrumental in making education a more creative experience.

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TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

In ancient Greece, the basic aim of Spartan education was the preservation of the folkways. The thoughts and actions of growing youth were carefully controlled. In early Athens, close imitation was a virtue. The Sophists introduced a new type of teaching in which learning was fun but shallow and education was for personal enjoyment. Into this setting came Socrates, who gave creative learning and thinking a big push. Even in an atmosphere of relative intellectual freedom, the creative thinking of young men was disturbing, so Socrates had to drink the poison hemlock.

The Roman genius for adaptation and application was far greater than tendencies to originality. Thus, critical and creative thought declined in the Roman Empire. The universities of the Middle Ages emphasized the lecture method and offered no encouragement for critical analysis, initiative, or originality. Throughout history, however, there have been a few teachers like Socrates. Thus, we have Comenius, Pestalozzi, Froebel, and others. Each of these innovators or reformers has had his day and won advocates, but each met powerful opposition that blocked full development and acceptance.

Experimentation and Reform in American Education

Education in the United States has been characterized by almost continuous experimentation and reform. In fact, many educators have complained about this characteristic of education in this country. For example, in 1880 one educational writer wrote as follows:

> Our incessant experiments in educational reform serve only to lessen the prestige of our culture; they perplex teachers, scholars, and parents alike; they lead to doubt and hesitancy, and must all end in a simple return to the old system (Marble, 1880, p. 176).

This complaint registered in 1880 is quite similar to the following statement in the February, 1976 issue of the Phi Delta Kappan:

> Reform is a perennial activity in American schools. The professionals who run them pride themselves on their openness to "change" and "innovation." Funds are still being invested in the name of "reform" even in times of economic downturn. Yet there is no hard evidence that the nation's schooling system is in the midst of fundamental redesign. (Stevens, 1976, p. 371)

It is my belief, however, that there have been some fundamental changes in education in the United States in the direction of more creative thinking and more creative expression, that these changes are real and not illusory, and that they are perhaps as great in language arts as in any other subject matter field. First, I would like to trace these changes in historical perspective and then try to show where I think we are and where we are going in creativity through language arts.

In 1964, the educational historian, Frederick Mayer, wrote that American educational thought had passed through four identifiable periods. The first was dominated by Puritan ideas, authoritarianism, stress on the limitations of man, and the view of man as a sinner filled with evil. It made the teacher a punitive disciplinarian. All dissenters were persecuted.

During the second period, we find a spirit of enlightenment and freedom. This is the period that gave us the Constitution and the Bill of Rights. Thinkers such as Franklin and Jefferson stressed creativity and the possibilities and freedom of man. Franklin once said, "When a man ceases to be creative, he ceases to really live."

About 1865 American educational thought moved into a third stage. It was the time of Emerson, a thorough-going individualist, who believed in intellectual independence, the inadequacy of the scientific method,

and the importance of intuitive thinking. He believed that one must be creative even to read well. He believed that the learner should be free and courageous. Emerson's ideas, however, were ridiculed and ignored. While his ideas had little overall impact on the education of his day, there were a few imaginative and courageous educators who tried to translate his ideas into educational materials and methods.

The fourth period, known as the era of Pragmatism, was represented by such eloquent spokesmen as William James, John Dewey, William Heard Kilpatrick, Francis Parker, Boyd Bode, George Counts, and others. This was the era of Progressive Education which centered on the interests of the child, emphasized democratic ways of behaving, made group standards important, and used problem-centered inquiry. Educational psychologists such as G. Stanley Hall and William James supplied ideas, many of which are only now being tested. G. Stanley Hall stressed the importance of creativity and placed emotions above intellect and intuition above reason. He believed, however, that too much analysis into the creative processes would destroy spontaneity and creativity and that we should not ask too many impertinent "how's" and "why's."

Since the passing of Progressive Education, there have been many movements and counter movements in American educational thought. American education is so vast, complex, varied, and changing, that it is difficult to determine the status of specific reform movements. When the "dust" clears, however, I believe that we will find that education in the United States has become more creative and that children in today's schools are functioning at a higher level creatively even than a few years ago, and that as adults they will solve problems in more creative ways.

Today's Revolutions

Perhaps one of the most revolutionary things that has occurred in education in the United States has been a revision of educational objectives. In the late 1950s I (Torrance, 1960) did some studies of the objectives of elementary and secondary teachers. Over 98 percent of their stated objectives were concerned with remembering, recognizing, and finding the one correct answer. There was almost no mention in statements of objectives of creativity, creative thinking, imagining, decision making, planning, forecasting, and the like. Educational psychology was largely a psychology of learning and not a psychology of thinking, feeling, changing, and growing. Today, statements of objectives at all levels of education and in all disciplines include frequent references to creative thinking, creative expression, creative problem solving, decision making, planning, predicting, and the like. There is widespread recognition not only that emotions and intuitive thinking are important but that to control our behavior and function more creatively we need to understand these processes. Elementary and secondary school textbooks, teachers' guides for using these books, supplementary instructional materials, filmed protocols of learning activities, and children's creative products provide objective evidence that a revolution has taken place. For example, a comparison of some of today's elementary textbooks with those of 1960 is almost shocking, the contrast is so great. For example, compare Ginn's reading programs of the early 1960s. Or compare Zaner-Bloser's Creative Growth with Handwriting program (Barbe et al., 1975) with the Zaner-Bloser handwriting programs of the early 1960s. They certainly reflect the changes in educational goals mentioned above. The changes are thoroughgoing and detailed.

Many educational reforms have not survived because the ideas behind the reform were never translated into curricula, textbooks, instructional materials, equipment, training programs, evaluation procedures, and the like. Although additional retooling is needed for a more creative kind of education, the amount of retooling has been considerable and I have documented much of this in another source (Torrance, 1974). In the early 1960s, my students and I found it necessary to create instructional materials separate from the traditional subject matter fields. There simply was no readiness for anything else. This resulted in such products as Myers and Torrance's Invitations to Thinking and Doing, Can You Imagine?, Invitations to Speaking and Writing Creatively, For Those Who Wonder, and Plots, Puzzles, and Ploys (1965, 1966). It also produced the Imagi/Craft materials (Cunnington and Torrance, 1965) with its Great Moments in Geographical Discovery, Great Moments in Invention and Scientific Discovery, and Great Fantasies. I suppose these materials were more language arts than anything else but they cut across all curricula areas. We did not ever propose that creativity be taught separately from the rest of the curriculum. However, in 1960 there was not a readiness for anything else and these materials apparently gave us some useful prototypes. At least they are widely imitated in the curricular materials of the 1970s in language arts, social studies, science, and the like. It seems to me that we are now ready for a further stage of development in which creative problem solving, creative expression, and the like will be integrated into the total curriculum rather than just in specific subject matter areas. The impetus for this seems to be occurring through the Career Education Movement which was given top priority by the United States Office of Education in 1971 (Marland, 1972, 1974).

The real impact of a more creative kind of education, however, cannot be evaluated in terms of curricula, textbooks, teaching methods, and the like. We need to evaluate what happens to children in the process. This is a difficult matter and procedures for assessing the outcomes of educational programs have certainly not kept up with the changes that have taken place in educational goals. We do have some positive evidence that some of our hopes are being realized.

My associates and I provide a national scoring service for the Torrance Tests of Creative Thinking (Torrance, 1966, 1974) and we became aware early in 1975 that the tests being sent for scoring now reflect a much higher level of creative functioning than those we had scored in the 1960s. This was despite the fact that more of these tests were being given and that more of them were being sent to us for scoring. We did not say much about this because there was no way of knowing whether we were sampling the same population we were sampling in the 1960s. However, when educators became disturbed in the fall of 1975 concerning the nationwide drop in Scholastic Aptitude Test scores (Gribbin, 1975), we were moved to conduct further investigation. We obtained the cooperation of an elementary school in Georgia in which the Torrance Tests of Creative Thinking had been administered in 1967. We ascertained that the population of the school district had been quite stable during the intervening period and that the faculty and administration of the school had remained fairly stable. The school had never made any special drive to "teach creativity." However, the school has used a number of textbooks and instructional materials which contain definite and thoroughly integrated creativity strands. For example, the Reading 360 Program is used throughout the school. My associates and I administered both the figural and verbal forms of the Torrance Tests of Creative Thinking to all sixth

graders present on the day of testing, just as we had done approximately 9 years ago. The 1975 sixth graders excelled their 1967 counterparts on both the figural and verbal measures, with most differences statistically significant at better than the one percent level of confidence. In earlier studies we (Torrance & Gupta, 1964) had found that with the consistent use of creativity instructional materials, children showed not only greater growth in creative thinking skills, but greater participation outside of school in creative learning activities, greater enjoyment of school, less outright dislike of school and absenteeism, and as much growth in traditional educational skills as children in control groups. In an unpublished study, one of my students who must remain anonymous found that children randomly assigned to a creative teaching approach enjoyed better health than their controls under less creative programs. They made far fewer visits to the school nurse for headaches, stomach aches, injuries, and the like.

Another interesting indicator of the change that has taken place in education in the United States is found in a study by Feldhusen and Treffinger (1975) of teachers' attitudes and practices in teaching creativity and problem-solving to economically disadvantaged and minority children. In a study involving 408 teachers in five large cities, they found that teachers in 1975 have a more favorable attitude concerning the teaching of creativity and problem-solving than did teachers in 1962 (Ammons and Ammons, 1962 ab).

Future Orientation

Creative thinking, problem solving, decision making, predicting, planning, and the like are prominent in almost all of the newer curriculum developments and experiments. During the past year I have become quite involved in the Career Education movement. As I examine the conditions in education to

which this reform is responding, its goals, and its programmatic assumptions (Hoyt, 1974), it is apparent that creativity is at its very heart. It is only through the development and mobilization of the creative thinking of students that the fusion among school learning, the world of work, and personal characteristics of the student can occur. In almost all of the curricula that I have examined there is much emphasis upon seeing implications, producing alternatives, predicting trends, predicting the consequences of various decisions, elaborating alternatives, asking questions, decision making, getting new information, recognizing and understanding one's own potentialities, changing one's own characteristics, and the like. There is a strong element of creativity in all of these. There is in all of them a future orientation.

To me, Career Education represents a synthesis of traditional educational goals, creativity, self awareness, and futurism. From the very beginning, many of the learning activities I designed were calculated to help students learn about the future. More recently, I have increased this emphasis because I now see it as of even greater importance than I did in the late 1950s and early 1960s. Right now, I am greatly involved in promoting at an international level Future Problem Solving Bowls (Torrance, 1976). We now have people in over 20 different countries and several states of the United States interested in sponsoring such bowls and training teams in future problem solving. This seems to be resulting in provisions for intensive training in creative problem solving and the acquisition of information about future trends and predictions.

Finally, I would like to make a few observations concerning the processes by which the fusion occurs among school learning, the world of work, futuristies,

and personal characteristics. Since I must be extremely brief, I shall try to illustrate how this occurs through one of the four major competency areas chosen by our team at the University of Georgia in redesigning our pre-service teacher education program. This competency area is concerned with assisting students to see and develop clear relationships between what they are being asked to learn in school and potential future careers. It is concerned with developing in children such intellectual skills as seeing problems, seeing implications, asking pertinent questions, awareness of consequences, making predictions, divergent production of implications, elaborating upon given information, and the like. In applying these abilities to teaching at the primary level, a teacher would help children become aware of the importance of being able to do such things as read, write, and speak effectively. To do this, involves helping the children learn about their futures in some way that is meaningful to them. At the primary level, the teacher must also help children develop a positive attitude toward learning and an awareness of subject matter in classroom and playground activities, home, and community. Again, this calls for a future orientation and seeing the connection between what is read in books, seen in pictures and films, and the like, and problems that occur in the classroom, playground, community, and home.

At the intermediate level, the teaching would increase the child's awareness of the subject matter relevancy through applications to home, community, and specific worker examples. There would be a beginning awareness of educational alternatives and their implications.

At the middle school level, the teacher would help children apply subject matter in a career context in simulation and actual work settings, become aware of educational alternatives, and see relationships of these alternatives to potential careers.

At the high school level, teachers would work for increasing application of knowledge in simulated and actual work settings, increasing knowledge of educational alternatives and relationships to potential careers, and the development of necessary competencies for continuing education.

Now, very quickly let me identify what I consider some of the most promising techniques the language arts teacher can use to help children learn about the future in this competency area.

Sociodrama as a Creative Problem Solving Process

Any of the creative dramatic methods can be used in Language arts to help children learn about the future, but I personally think that sociodrama has the greatest potentiality of any of them. I have conceptualized sociodrama as a creative problem solving process (Torrance, 1975). As such, the creative problem solving can be as deliberate and as disciplined as in any other creative problem solving procedure. The objective of sociodrama is to study a group or social problem by dramatic methods. In the case of futuristic sociodrama, the problem focus is a conflict which is expected to arise out of some trend or predicted future development. With a career education focus the concern would be a conflict which is expected to arise in a potential career situation in the application of knowledge or skills in specific subject matter. If the students are involved in real problem solving or in actual work situations, the problem focus might be on a common problem faced by members of the group with a view to finding more effective future solutions. Multiple solutions may be proposed, tested, and evaluated sociodramatically. As new insights occur, these too can be practiced and evaluated. The planning, selling, and implementing stages can also be practiced and tested. In addition to the speech and oral verbal and nonverbal communication skills taught through this methodology, other language

arts activities such as letter writing, interviewing, film making, and reading might result.

Many of these goals might be achieved through role playing or other creative dramatic techniques, but the production techniques of sociodrama (e.g., soliloquy, double, role reversal, mirror, etc.) make it more versatile for solving problems creatively and studying the future.

Scenario

A number of the research methods of futurism can be used by the language arts teacher (Hencley & Yates, 1974; Laconte, 1975). However, the scenario method impresses me as one of the most promising. Basically, a scenario is a narrative in which the author strings together a series of events that might conceivably occur in the future. The author bases his scenario on his belief in the possibility that such a sequence of events normally derives from some sort of trend extrapolation or analysis of expert opinion. By weaving these data into a narrative, an author can make a convincing case for the probability of occurrence. The following brief excerpt from an essay by Ehrlich in Toffler's The Futurists (1972) will illustrate the essential elements of the scenario technique:

> The end of the ocean came late in the summer of 1979, and it came even more rapidly than the biologists had expected. There had been signs for more than a decade, commencing with the discovery in 1968 that DDT slows down photosynthesis in marine life. It was announced in a short paper in the technical journal Science, but to ecologists it smacked of doomsday. They knew that all life in the sea depends upon photosynthesis, the chemical process by which green plants bind the sun's energy and make it available to living things. And they knew that DDT and similar chlorinated hydrocarbons had polluted the entire surfact of the earth, including the sea. (p. 13)

You will note that this scenario took a current piece of data (the discovery of the relationship of DDT and photosynthesis) and projects a future occurrence (the end of the ocean) based on expert opinion (ecologists). Ehrlich is not really forecasting what will happen, but what could happen if nothing is done to stop it. Scenarios are frequently used as calls to action and are effective. In fact, the results of the work of Ehrlich and others was that DDT was banned and less DDT is finding its way into the oceans.

It is easy to see how versatile the scenario technique could be in the hands of the elementary language arts teacher. Scenarios by elementary school students might be motivated from anything ranging from a reading lesson, a trend described in a newspaper article, or a disturbing trend in the classroom or school.

Science Fiction

The use of science fiction is of course akin to the scenario. At the high school level, the study of science fiction as literature has been increasing. However, there is a growing literature in science fiction for elementary age children. One good example is Children of Infinity, a collection of original science fiction stories for young readers compiled by Roger Elwood. Lester Del Rey in an introductory essay argues convincingly of the value of science fiction as a means whereby young people can learn about the future. He points out that much that was science fiction a few years ago has now become reality. He believes that in addition to being fun to read that science fiction is an excellent way to prepare for whatever futures we may meet. Upper elementary school students who excel in the scenario technique might be encouraged to go a step further and write science fiction.

Conclusion

In this brief presentation I have been able to mention only a few of the possible means whereby elementary language arts teachers may help children learn about and prepare for the future. In summary, may I remind you that creativity has always been a controversial issue in American education. This is fortunate although "creativity has not always won out." The evidence seems to be that we are moving into a new phase in educational thinking about the role of creativity in education. Our educational objectives now include many aspects of creative behavior. Textbooks, supplementary educational materials, tests, and training methods which facilitate creativity have increased and seem to be having an important impact. Perhaps more important is the fact that most of the important curriculum movements of today give an important place to creativity. I have cited Career Education in this respect because of its great promise and because of the high priority it is being given now by so many organizations.

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